

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant:	Chulho Kim, et al.)	
)	
Serial No.:	10/733,725)	Before the Board of Appeals
)	
Filed:	December 11, 2003)	Appeal No.
)	
For:	EFFICIENT PROTOCOL PROCESSING)	
	TO INCREASE BANDWIDTH IN)	
	INTERRUPT MODE)	

APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

This Appeal Brief is submitted in response to a Final Office Action mailed on January 7, 2011, a Pre-Appeal Review Request and Notice of Appeal filed on April 7, 2011, and a Pre-Appeal Review Decision mailed on May 23, 2011.

THE REAL PARTY IN INTEREST

The real party in interest in this appeal is International Business Machines, Inc. Ownership by International Business Machines, Inc. is established by assignment document recorded for this application on December 11, 2003 on Reel 014816, Frame 0844.

RELATED APPEALS AND INTERFERENCES

Appellant knows of no related patent applications or patents under appeal or interference proceeding.

STATUS OF CLAIMS

Claims 10 and 12-19 are pending. Claims 10 and 12-19 have been rejected under 35 U.S.C. § 103(a). Accordingly, the rejections of claims 10 and 12-19 under 35 U.S.C. 103(a) are at issue and are herein appealed.

STATUS OF AMENDMENTS

There have been no amendments filed after the final rejection mailed January 7, 2011.

SUMMARY OF CLAIMED SUBJECT MATTER

A concise explanation of the subject matter defined in each of the independent claims (10 and 19) involved in the appeal is provided below:

Claim 10

Independent claim 10 recites “[a] method for increasing bandwidth in an interrupt mode processing protocol.” The method includes creating a state variable configured to track received messages (Figure 2; Page 4, lines 21-27). The method also includes incrementing said state variable only if the received message exhibits multiple packets (Figure 2; Page 5, lines 1-2) and decrementing said state variable when the received message exhibits multiple packets and completes (Figure 2; Page 5, lines 6-7). In claim 10, an interrupt is generated with a communications adapter running in an interrupt mode that places data from the received message in a receive buffer (Figure 2; Page 4, lines 10-16). In claim 10, the interrupt mode is exited when there are no more packets in said receive buffer (Figure 2; Page 5, lines 12-13). In addition, to exit the interrupt mode, at least one of: the state variable being equal to a selected value (Figure 2; Page 5, line 14) and a selected interval has transpired since said interrupt was generated (Figure 2; Page 5, lines 14-15) must be true (Figure 2; Page 5, lines 14-15).

Claim 19

Independent claim 19 recites “[a] storage medium encoded with ah machine-readable computer program code, said code including instructions for causing a computer to implement a method for increasing bandwidth in an interrupt mode processing protocol” (Figure 2; Page 7, lines 21-27). The method includes creating a state variable configured to track received messages (Figure 2; Page 4, lines 21-27). The method also includes incrementing said state variable only if the received message exhibits multiple packets (Figure 2; Page 5, lines 1-2) and decrementing said state variable when the received message exhibits multiple packets and completes (Figure 2; Page 5, lines 6-7). In claim 10, an interrupt is generated with a communications adapter running in an interrupt mode that places data from the received message in a receive buffer (Figure 2; Page 4, lines 10-16). In claim 10, the interrupt mode is exited when there are no more packets in said receive buffer (Figure 2; Page 5, lines 12-13). In addition, to exit the interrupt mode, at least one of: the state variable being equal to a selected value (Figure 2; Page 5, line 14) and a selected interval has transpired since said interrupt was generated (Figure 2; Page 5, lines 14-15) must be true (Figure 2; Page 5, lines 14-15).

The above exemplary embodiments are discussed with respect to the aforementioned independent claims by way of example only and are not intended to in any way limit the scope of these claims.

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Claims 10, 12-15 and 17-19 have been rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Connor 1 (U.S. 6,686,466) in view of Connor 2 (U.S. 6,993,61). Claim 16 has been rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Connor 1 in view of Connor 2 and further in view of Killian (U.S. 6,473,426).

ARGUMENT

Claims 10, 12-15 and 17-19 have been rejected under 35 U.S.C. §103(a) as being

allegedly unpatentable over Connor 1 in view of Connor 2. As claims 10 and 19 both include the same method limitations, the two claims are dealt with together herein.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Examiner must meet the burden of establishing that all elements of the invention are taught or suggested in the prior art. MPEP §2143.03.

Independent claims 10 and 19 recite, *inter alia*, exiting the interrupt mode when: there are no more packets in said receive buffer and at least one of: said state variable is equal to a selected value and a selected interval has transpired since said interrupt was generated. To meet this limitation, a prior art reference or combination must teach exiting an interrupt mode when items 1 and 2 below are **both** satisfied:

1) there are no more packets in the receive buffer; **and**

2) **one** of: a) the state variable is equal to a selected value **or** b) a selected interval has transpired since said interrupt was generated.

Here, the Examiner has, quite simply, failed to show that the combination of Connor 1 and Connor 2 teaches a combination that includes exiting an interrupt mode when both 1) and 2) are satisfied. As such, the Examiner has failed to establish a prima facie case of obviousness.

The Examiner does point out that Connor 2 allegedly teaches “exiting the interrupt mode when: there are no more packets in said receive buffer” (Final Office Action at paragraph 10). The Examiner, however, **nowhere** addresses either requirement a) or requirement b) of item 2 above. Without showing where in the cited references either a) or b) is taught, the rejection of claims 10 and 19 cannot meet the requirements of MPEP §2143.03. That is, a prima facie case of obviousness has not been established. As such, the rejection of claims 10 and 19, and all claims that depend from them, is improper and must be withdrawn.

Claims 12-18 depend from claim 1 and, as such, are patentable for at least the same reasons.

CONCLUSION

In view of the foregoing, it is urged that the final rejection of claims 10 and 12-19 be overturned. The final rejection is in error and should be reversed. The fee set forth in 37 CFR 41.20(b)(2) is enclosed herewith. If there are any additional charges with respect to this Appeal Brief, or otherwise, please charge them to Deposit Account No. 09-0447.

Respectfully submitted,

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CLAIM APPENDIX

1.-9 (Cancelled)

10. A method for increasing bandwidth in an interrupt mode processing protocol comprising:

creating a state variable configured to track received messages;

incrementing said state variable only if said received message exhibits multiple packets;

decrementing said state variable when said received message exhibits multiple packets and completes;

generating an interrupt, with a communications adapter running in an interrupt mode, said communications adapter placing data from received message in a receive buffer, and

exiting the interrupt mode when: there are no more packets in said receive buffer; and at least one of: said state variable is equal to a selected value and a selected interval has transpired since said interrupt was generated.

11. (Cancelled)

12. The method of claim 11 wherein said selected interval is 100 milliseconds.

13. The method of claim 10 wherein said state variable tracks a number of packets in said received message exhibiting multiple packets.

14. The method of claim 10 wherein said received messages exhibiting a single packet are ignored with respect to said state variable.

15. The method of claim 10 wherein said state variable is created in said recipient.

16. The method of claim 10 wherein said state variable is namespaced based on a selected sender of a message.

17. The method of claim 10 wherein said state variable is includes at least one of a function and one or more parameters.

18. The method of claim 17 wherein said parameters include at least one of a state variable name, a sender, and a message.

19. A storage medium encoded with a machine-readable computer program code, said code including instructions for causing a computer to implement a method for increasing bandwidth in an interrupt mode processing protocol, the method comprising:

creating a state variable configured to track received messages;

incrementing said state variable only if said received message exhibits multiple packets;

decrementing said state variable when said received message exhibits multiple packets and completes;

generating an interrupt, with a communications adapter running in an interrupt mode, said communications adapter placing data from received message in a receive buffer, and

exiting the interrupt mode when: there are no more packets in said receive buffer; and at least one of: said state variable is equal to a selected value and a selected interval has transpired since said interrupt was generated.

20. (Cancelled)

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None